

Effect of physiotherapy on congenital muscular torticollis and parental satisfaction - a randomized controlled trial

Background Congenital muscular torticollis (CMT) has significant therapeutic relevance, with a reported incidence ranging from 0.2% to 16%. Physiotherapy is therefore one of the most frequently applied interventions for its treatment [1, 2].

Objectives Whether Václav Vojta's therapy is superior to the Neurodevelopmental treatment (NDT) concept of Berta and Karel Bobath has been a subject of much debate [3]. Furthermore, it was necessary to determine whether the strenuous Vojta therapy – which often involves intense crying in infants - leads to any side effects [4].

Methods In this randomized controlled trial, the effects of Vojta therapy and NDT were compared in infants with CMT. A total of 65 infants with CMT were recruited. 37 infants aged six to eight weeks (mean 7.38) met the inclusion criteria and were randomly assigned to either the Vojta (n= 19) or the NDT group (n= 18). Using a standardized and blinded video-based assessment, restriction in head rotation and convexity of the spine in prone and supine position were documented by the research group before and after therapy. A reduction of at least four points (range of scale 20 points) in CMT was defined as a clinically relevant change [5]. In addition, parents were asked to complete a specially developed questionnaire about their infant's behavior and well-being, as well as the duration and frequency of home therapy, before the start of the study and then every 14 days.

Results During the eight-week study period, both groups achieved an average reduction in asymmetry of four points. A mean pre-post difference of -2.96 points between the groups was observed in favor of Vojta therapy. Parents reported no concerning changes in their infants' behavior, despite frequent crying during Vojta therapy sessions. Calming, sleeping, feeding, and defecation patterns remained normal. Significant improvements were observed in both study arms, resulting in no dropouts or group changes. No adverse side effects were identified.

Conclusion The high level of parental satisfaction with the therapy may explain why families completed only about half of the recommended treatment frequency and duration. Both physiotherapeutic approaches proved effective in treating CMT, and parents implemented home therapy comparably well in both groups. However, the therapeutic efficacy of Vojta therapy was significantly higher than that of NDT for infants with CMT. The initially suspected severe biopsychosocial stress on the infants and their families was not reported.

References

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